SYSTEM AND METHOD FOR AUTOMATI-CALLY OBTAINING A DIGITAL IMAGE OF A HEART

Abstract

A system and a method for obtaining a digital image of a heart of a person are provided. The method includes scanning an internal anatomy of a chest region of the person to obtain first scanning data. The method further includes generating a first plurality of cross–sectional digital images of the heart based on the first scanning data. The method further includes automatically determining a ventricular blood volume indicated by each of the first plurality of cross–sectional digital images. The method further includes automatically selecting a second digital image from the first plurality of cross–sectional digital images indicating a largest ventricular blood volume. The method further includes automatically identifying a left ventricular myocardium in the second digital image and both a first apex position and a first base position of the left ventricular myocardium in the second digital image. The method further includes automatically generating a first axis extending through the first apex position and the first base posi-

tion in the second digital image. The method further includes scanning the internal anatomy of the chest region of the person along the first axis perpendicular to a first plane defined by the second digital image to obtain second scanning data. The method further includes generating a third digital image of the heart from the second scanning data. The method further includes automatically identifying the left ventricular myocardium in the third digital image and both a second apex position and a second base position of the left ventricular myocardium in the third digital image. The method further includes automatically generating a second axis extending through the second apex position and the second base position in the third digital image. The method further includes scanning the internal anatomy of the chest region of the person along a third plane extending through the second axis and being perpendicular to a second plane defined by the third digital image to obtain third scanning data. Finally, the method includes generating a fourth digital image of four chambers of the heart based on the third scanning data.